

REMARKS

Claims 1-3 and 9 have been amended. No claims have been cancelled. No new claims have been added. Applicant reserves the right to pursue the original claims and other claims in this application and in other applications.

Applicant's representative is grateful for the allowance of claims 12-18.

Claims 1-3 and 8-10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Chahroudi (U.S. Patent No. 5,198,922). Claims 1-2 and 8-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tedesco (U.S. Patent No. 5,861,990) in view of Chahroudi. Claims 6-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tedesco in view of Chahroudi and Hoch (U.S. Patent No. 6,002,520). These rejections are respectfully traversed.

The present invention is directed at an optical beam homogenizer which includes a transmissive or reflective element having an exterior output surface which is irregularly shaped on one side. Independent claim 1 recites:

An optical device, comprising: a substrate comprising: a smooth regularly shaped exterior surface; and an irregularly shaped exterior output surface, said irregularly shaped exterior output surface comprising: a first optical element ...; and a second optical element, adjacent to said first optical element on the irregularly shaped exterior surface and formed on a same side of said irregularly shaped exterior output surface as said first optical element ... wherein said first and second shapes are microwedges ... said first optical element and said second optical element have non-textured and substantially planar output surfaces (emphasis supplied).

Claim 9 recites:

An optical system, comprising: ... an optical device for homogenizing said beam, said optical device including a

substrate, the substrate comprising: a smooth regularly shaped exterior surface; and an irregularly shaped exterior output surface, said irregularly shaped exterior output surface comprising, a plurality of adjacent optical elements for directing light exiting the irregularly shaped exterior output surface to form respective non-adjacent portions of an angular pattern, wherein said optical elements are microwedges formed on a same side of said irregularly shaped exterior output surface and said microwedges have non-textured and substantially planar output surfaces (emphasis supplied).

Chahroudi discloses an optical shutter system which features diffuse reflections instead of the specular reflections normally associated with optical shutter systems. See column 1, lines 45-49; column 2, lines 8-21. The optical shutter system (Figs. 1-2) include a first optical element (3) and a second optical element (2), which surrounds and are separated by an optical shutter element (1). More specifically, the first optical element (3) includes a smooth regularly shaped input surface and an irregular output surface, while the second optical element (2) includes an irregular input surface and a smooth output surface. Chahroudi therefore fails to teach or suggest the above recited portions of independent claims 1 and 9, which require the first and second optical element (claim 1), or the plurality of optical elements (claim 9), to be formed on a same side of a irregularly shaped exterior output surface. Instead, Chahroudi discloses a system having a composite optical system formed by two separate substrates separated by the optical shutter element (1), in which the system features smooth regularly shaped input and output surfaces.

Tedesco discloses an optical diffuser and light concentrator. Fig. 1 illustrates the optical device of Tedesco, which includes an output surface including a plurality of projections. Column 3, lines 19-22. Significantly, Fig. 1 illustrates the projections of Tedesco to be substantially curved. In contrast, the claimed invention recite the use of substantially planar microwedges. For example, even the curved surfaces disclosed in

Fig. 6 of the application are substantially planar. That is, the end points of each curved surfaces correspond to the same end point which would be used in a planar embodiment. Compare Fig. 6 with Fig. 7. Additionally, while Fig. 6 has been drawn in an exaggerated manner to show the curvature, it should be kept in mind that the specification states that the surfaces corresponding to Fig. 6 are only slightly curved. Specification, page 12. In contrast, Fig. 1 of Tedesco illustrates highly curved projections cannot be fairly characterized to be microwedges.

The Office Action further cites to Hansen (which discloses a reflective optical polarizer), and Hotch (which discloses an illumination system), however, neither Hansen nor Hotch include any disclosure or suggestion which rectifies the above noted deficiencies in Chahroudi and Tedesco.

Finally, please note that the canceled and/or amended claims have been canceled and/or amended in this case solely for the purpose of furthering the prosecution of the present application. Applicant reserves the right to claim the subject matter of the canceled claims, the claims pending prior to this Amendment, and/or the subject matter of other claims embodied in this application, or any continuation, division, reissue, reexamination or other application. Any amendments made to the application are not made for the purpose of distinguishing the claims over prior art, except as specifically discussed in the Remarks section of this paper.

Claims 1 and 9 are therefore believed to be allowable over the prior art of record. Claims 2-3 and 6-8, which depend from claim 1, are also believed to be allowable for at least the same reasons as claim 1. Claims 12-18 have already been allowed.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

By 

Mark J. Thronson

Registration No.: 33,082

Christopher S. Chow

Registration No.: 46,493

DICKSTEIN SHAPIRO MORIN &

OSHINSKY LLP

2101 L Street NW

Washington, DC 20037-1526

(202) 785-9700

Attorneys for Applicant